

WHAT IS CLAIMED IS:

1. A scanner comprising:
 - a transport mechanism for moving a document;
 - a sensor for detecting a leading edge and trailing edge of said document;
 - a camera for scanning said document, detecting a leading edge of said document, and detecting a trailing edge of said document; and
 - a controller which:
 - 1) receives a digital signal from said camera when said camera detects said document in a field of said camera;
 - 2) receives a signal from said sensor when said sensor detects said document in a field of said sensor;wherein said controller:
 - 1) starts image capture when a leading edge of said document is detected by either said sensor or said camera, and stops image capture when a trailing edge of said document is detected by either said sensor or said camera; and
 - 2) turns off a drive mechanism when a leading edge of said document is detected by either said sensor or said camera, and starts a drive mechanism when a trailing edge of said document is detected by both said sensor and said camera.
2. A scanner as in claim 1 wherein image capture begins after said camera detects a specified range of pixels greater than a predetermined light level.
3. A scanner as in claim 1 wherein image capture ends after said camera detects a specified range of pixels less than a predetermined light level.

4. A scanner as in claim 1 wherein said controller comprises a microprocessor.

5. A scanner as in claim 1 wherein said controller comprises a field programmable gate array (FPGA).

6. A scanner as in claim 1 wherein said controller comprises a application specific integrated circuit (ASIC).

7. A scanner as in claim 1 wherein said controller and said camera are a single unit.

8. A scanner as in claim 1 wherein:
said controller activates said camera for image capture only during the presence of said document in said first camera field.

9. A scanner as in claim 1 wherein said scanner comprises an automatic document feeder.

10. A method of scanning a document comprising:
transporting said document past a sensor and a camera;
detecting a leading edge of said document at either said sensor or said camera;
turning off a drive mechanism when said leading edge of said document is detected;
scanning said document with said camera;
detecting a trailing edge of said document at either said sensor or said camera; and
starting said drive mechanism when said trailing edge of said document is detected.

11. A method of scanning a document as in claim 10 wherein said drive mechanism is started when said trailing edge of said document is detected by said sensor and said camera.

12. A scanner for capturing an image of a document comprising:

a transport mechanism for moving said document;

a sensor for detecting a leading edge and trailing edge of said document;

a first camera for scanning a first side of said document, detecting a leading edge of said document, and detecting a trailing edge of said document; and

a controller which:

1) receives a digital signal from said first camera when said first camera detects said document in a field of said first camera;

2) receives a digital signal from said sensor when said sensor detects said document in a field of said sensor;

wherein said controller:

1) starts image capture by said first camera of said first side of said document when a leading edge of said document is detected by either said sensor or said first camera, and stops image capture of said first side of said document when a trailing edge of said document is detected by either said sensor or said first camera; and

2) turns off a drive mechanism when a leading edge of said document is detected by either said sensor or said camera, and starts a drive mechanism when a trailing edge of said document is detected by both said sensor and said camera.

13. A scanner as in claim 12 comprising:

a second camera for scanning a second side of said document, detecting said leading edge of said document, and detecting said trailing edge of said document and;

said controller:

3) receives a digital signal from said second camera when said second camera detects said document in a field of said second camera;

wherein said controller:

3) starts image capture by said second camera of said second side of said document when a leading edge of said document is detected by either said sensor or said second camera, and stops image capture of said second side of said document when a trailing edge of said document is detected by both said sensor and said second camera.

14. A method of scanning a document comprising:
 - transporting said document past a sensor;
 - detecting a leading edge of said document at either said sensor, a first camera, or a second camera;
 - turning off a drive mechanism when said leading edge of said document is detected by either said sensor, said first camera, or said second camera;
 - scanning a first side of said document with said first camera;
 - capturing an image of said first side of said document when said document is in front of said first camera;
 - capturing an image of said second side of said document when said document is in front of said second camera;
 - detecting a trailing edge of said document by either said sensor, said first camera, or said second camera; and

starting said drive mechanism when said trailing edge of said document is detected by said sensor, said first camera, and said second camera.